
Z($e\bar{e}$)+Jets Analysis: unsmearing



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H(Multileptons)

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Overview

- **MC sample** (generated by Suyong, reco'd by James):
 - Z + 1jet (Pythia?)
 - 800k events
 - pT cut 8GeV
 - Contains only particle jets and MC information
 - No GEANT/d0sim
- **Purpose:**
 - Determine particle jet multiplicities w/o any corrections
 - Determine particle jet multiplicities after applying data resolution smearing
 - Ratio will give unsmeareding coefficients
 - Apply unsmeareding coefficients to jet multiplicities in data to unsmeared the xsection

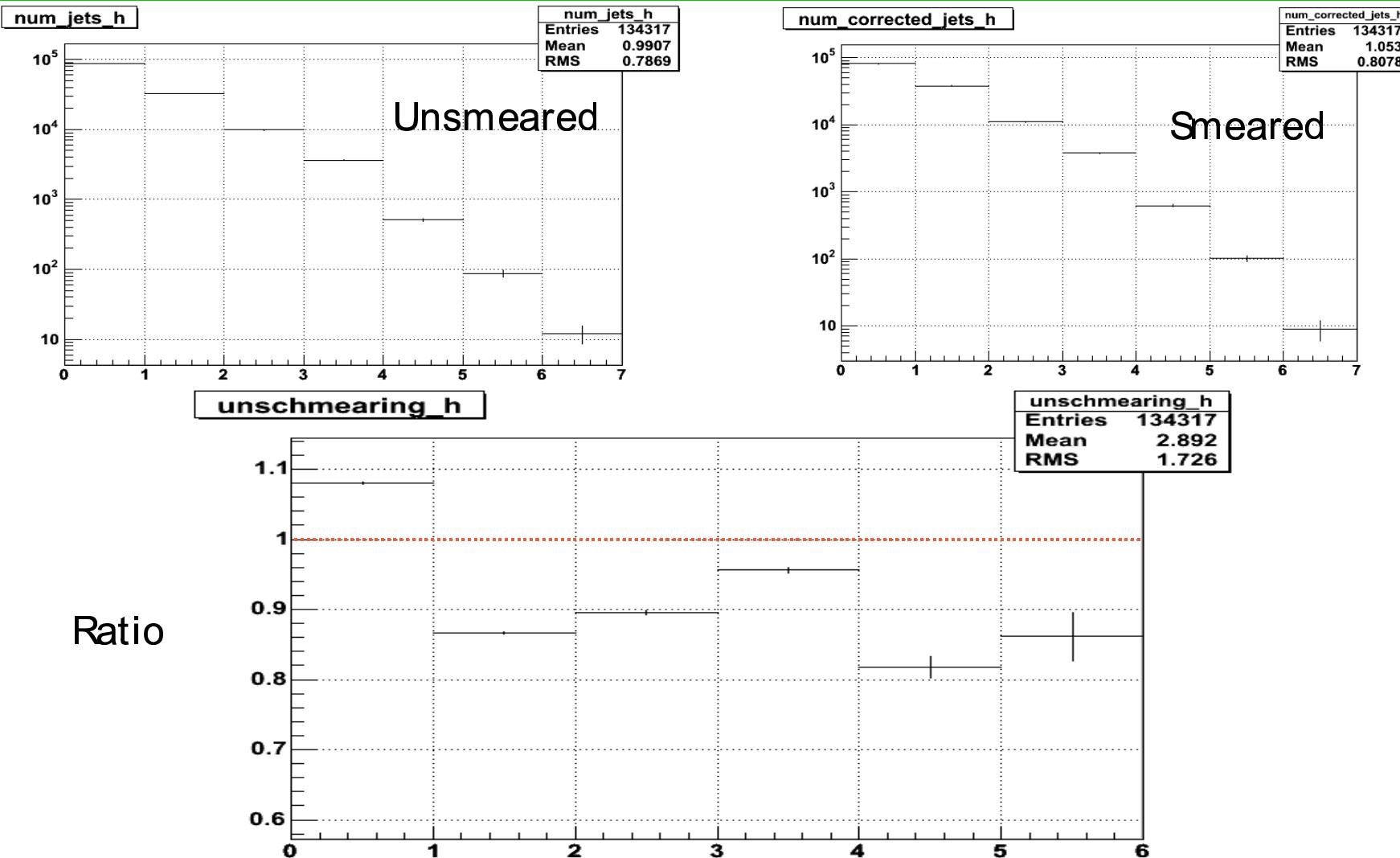


Selection Criteria

- Selecting generated electrons with:
 - $pT > 25\text{GeV}$
 - $|\eta| < 1.1$
 - $75\text{GeV} < M(ee) < 105\text{GeV}$
- Selecting particle jets with:
 - (Smeared) $pT > 20\text{GeV}$
 - $|\eta| < 2.5$
 - No overlapping with Z electrons within dR of 0.4



Multiplicities and unsmeearing coefficients



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todo

- Apply jet reco efficiencies
- Correct bug in MC particle jets ('stable' quark forms particle jet)
- Error estimation
- Jet removal cut correction (jet-electron overlaps)
- Jet promotion correction (jets from extra interactions)
- Analysis note

